



SAFETY HEALTH AND
ENVIRONMENTAL AFFAIRS

SEP 15 1992

ORIGINAL

MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 2577 COOLING TREATMENT

Emergency Telephone Number

Medical (708) 920-1510 (24 hours)

SECTION 1 PRODUCT IDENTIFICATION

TRADE NAME: NALCO 2577 COOLING TREATMENT

DESCRIPTION: An aqueous solution of sulfuric acid and a carboxylate

NFPA 704M/HMIS RATING: 3/3 HEALTH 0/0 FLAMMABILITY 0/0 REACTIVITY 0 OTHER
0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

SECTION 2 HAZARDOUS INGREDIENTS

Our hazard evaluation has identified the following chemical ingredient(s) as hazardous under OSHA's Hazard Communication Rule, 29 CFR 1910.1200. Consult Section 14 for the nature of the hazard(s).

INGREDIENT(S)	CAS #	APPROX. %
Sulfuric acid	7664-93-9	40+

SECTION 3 PRECAUTIONARY LABEL INFORMATION

WARNING: Causes burns to skin and eyes. Do not get in eyes, on skin, or on clothing. Wear goggles or face shield when handling. Avoid prolonged or repeated breathing of vapor. Use with adequate ventilation. Do not take internally.

Empty containers may contain residual product. Do not reuse container unless properly reconditioned.

SECTION 4 FIRST AID INFORMATION

EYES: Immediately flush for at least 15 minutes while holding eyelids open. Call a physician at once.

SKIN: Immediately flush with water for at least 15 minutes. For a large splash, flood body under a shower. Call a physician at once.

INGESTION: Do not induce vomiting. Give water. Call a physician at once.

NOTE TO PHYSICIAN: Based on the individual reactions of the patient, the physician's judgment should be used to control symptoms and clinical condition.

CAUTION: If unconscious, having trouble breathing or in convulsions, do not induce vomiting or give water.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 2577 COOLING TREATMENT

Emergency Telephone Number

Medical (708) 920-1510 (24 hours)

SECTION 4 FIRST AID INFORMATION

(CONTINUED)

and convulsions may be needed.

SECTION 5 HEALTH EFFECTS INFORMATION

PRIMARY ROUTE(S) OF EXPOSURE: Eye, Skin, Inhalation

EYE CONTACT: Corrosive to the eyes with possible permanent damage depending on the length of exposure and on the first aid action given.

SKIN CONTACT: Corrosive to the skin, possibly resulting in third degree burns depending on the length of exposure and on the first aid action given.

INGESTION: Can be harmful.

INHALATION: Can be corrosive to the mucous membranes and the lungs.

SYMPTOMS OF EXPOSURE: A review of available data does not identify any symptoms from exposure not previously mentioned.

AGGRAVATION OF EXISTING CONDITIONS: A review of available data does not identify any worsening of existing conditions.

SECTION 6 TOXICOLOGY INFORMATION

ACUTE TOXICITY STUDIES: Acute toxicity studies have not been conducted on this product, but toxicity studies of the ingredient(s) in Section 2 have been reviewed. The results are shown below.

ACUTE ORAL TOXICITY (ALBINO RATS):
Sulfuric acid LD₅₀ = 2,140 mg/kg

ACUTE INHALATION TOXICITY (GUINEA PIGS):
Sulfuric acid LC₅₀ = 8 mg/m³

PRIMARY SKIN IRRITATION TEST (ALBINO RABBITS):
COMMENTS: 1300 micrograms of sulfuric acid produced severe irritation

SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

COLOR: Yellow	FORM: Liquid	
DENSITY:	11.4-11.7 lbs/gal.	
SOLUBILITY IN WATER:	Completely	
SPECIFIC GRAVITY:	1.39 @ 60 Degrees F	ASTM D-1298
pH (NEAT) =	Less than 2.0	ASTM E-70
VISCOSITY:	9 cps @ 60 Degrees F	ASTM D-2983



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 2577 COOLING TREATMENT

Emergency Telephone Number

Medical (708) 920-1510 (24 hours)

SECTION 7 PHYSICAL AND CHEMICAL PROPERTIES

(CONTINUED)

FREEZE POINT: -35 Degrees F ASTM D-1177
FLASH POINT: Greater than 220 Degrees F (PMCC) ASTM D-93

NOTE: These physical properties are typical values for this product.

SECTION 8 FIRE AND EXPLOSION INFORMATION

FLASH POINT: Greater than 220 Degrees F (PMCC) ASTM D-93

EXTINGUISHING MEDIA: Not applicable

UNUSUAL FIRE AND EXPLOSION HAZARD: May evolve SO_x under fire conditions.

SECTION 9 REACTIVITY INFORMATION

INCOMPATIBILITY: Avoid alkaline materials (eg. ammonia and its solutions, carbonates, sodium hydroxide (caustic), potassium hydroxide, calcium hydroxide (lime), cyanides, sulfides, hypochlorites, chlorites) which can generate heat with splattering or boiling and the release of toxic fumes.

THERMAL DECOMPOSITION PRODUCTS: In the event of combustion SO_x may be formed. Do not breathe smoke or fumes. Wear suitable protective equipment.

SECTION 10 PERSONAL PROTECTION EQUIPMENT

RESPIRATORY PROTECTION: If it is possible to generate significant levels of mists, a NIOSH approved or equivalent acid gas respirator is recommended.

For large spills, entry into large tanks, vessels or enclosed small spaces with inadequate ventilation, a pressure-demand, self-contained breathing apparatus is recommended.

VENTILATION: General ventilation is recommended. Additionally, local exhaust ventilation is recommended where aerosols may be released.

PROTECTIVE EQUIPMENT: Wear impermeable gloves, boots, apron and a face shield with chemical splash goggles. Examples of impermeable gloves available on the market are neoprene, nitrile, PVC, natural rubber, viton and butyl (compatibility studies have not been performed). A full slicker suit is recommended if gross exposure is possible.

The availability of an eye wash fountain and safety shower is recommended.

If clothing is contaminated, remove clothing and thoroughly wash the affected



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 2577 COOLING TREATMENT

Emergency Telephone Number

Medical (708) 920-1510 (24 hours)

SECTION 10 PERSONAL PROTECTION EQUIPMENT

(CONTINUED)

area. Launder contaminated clothing before reuse.

SECTION 11 SPILL AND DISPOSAL INFORMATION

IN CASE OF TRANSPORTATION ACCIDENTS, CALL THE FOLLOWING 24-HOUR TELEPHONE NUMBER (708-920-1510)

SPILL CONTROL AND RECOVERY:

Small liquid spills: Contain with absorbent material, such as clay, soil or any commercially available absorbent. Shovel reclaimed liquid and absorbent into recovery or salvage drums for disposal. Refer to CERCLA in Section 14.

Large liquid spills: Dike to prevent further movement and reclaim into recovery or salvage drums or tank truck for disposal. Refer to CERCLA in Section 14.

For large indoor spills, evacuate employees and ventilate area. Those responsible for control and recovery should wear the protective equipment specified in Section 10.

DISPOSAL: If this product becomes a waste, it meets the criteria of a hazardous waste as defined under the Resources Conservation and Recovery Act (RCRA) 40 CFR 261. Hazardous Waste D002.

As a hazardous liquid waste, it must be solidified with stabilizing agents (such as sand, fly ash, or cement) so that no free liquid remains before disposal to a licensed industrial waste landfill (Hazardous Waste Treatment, Storage and Disposal facility). A hazardous liquid waste can also be deep-well injected in accordance with local, state, and federal regulations.

SECTION 12 ENVIRONMENTAL INFORMATION

If released into the environment, see CERCLA in Section 14.

SECTION 13 TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME/HAZARD CODE - ACID, LIQUID, N.O.S.
CORROSIVE MATERIAL NA 1760
CONTAINS - SULFURIC ACID

SECTION 14 REGULATORY INFORMATION

The following regulations apply to this product.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 2577 COOLING TREATMENT

Emergency Telephone Number

Medical (708) 920-1510 (24 hours)

SECTION 14 REGULATORY INFORMATION

(CONTINUED)

FEDERAL REGULATIONS:

OSHA'S HAZARD COMMUNICATION RULE, 29 CFR 1910.1200:

Based on our hazard evaluation, the following ingredient in this product is hazardous and the reason is shown below.

Sulfuric acid - Corrosive

Sulfuric acid = TWA 1 mg/m³ ACGIH/TLV

CERCLA/SUPERFUND, 40 CFR 117, 302:

This product contains sulfuric acid, a Reportable Quantity (RQ) substance and if 2,000 pounds of product are released, it requires notification to the NATIONAL RESPONSE CENTER, WASHINGTON, D. C. (1-800-424-8802).

SARA/SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (TITLE III) - SECTIONS 302, 311, 312 AND 313:

SECTION 302 - EXTREMELY HAZARDOUS SUBSTANCES (40 CFR 355):

This product contains sulfuric acid, which is listed in Appendix A and B as an Extremely Hazardous Substance. The statutory threshold planning quantity for this substance is 1,000 pounds.

A release of 2,000 pounds of product will require a notification to your State Emergency Response Commission.

You may also be required to notify the NATIONAL RESPONSE CENTER
- See CERCLA/SUPERFUND, above.

SECTIONS 311 and 312 - MATERIAL SAFETY DATA SHEET REQUIREMENTS (40 CFR 370):

Our hazard evaluation has found this product to be hazardous. The product should be reported under the following EPA hazard categories:

- XX Immediate (acute) health hazard
- Delayed (chronic) health hazard
- Fire hazard
- Sudden release of pressure hazard
- Reactive hazard

SECTION 313 - LIST OF TOXIC CHEMICALS (40 CFR 372):

This product contains the following ingredient(s), (with CAS # and % range) which appear(s) on the List of Toxic Chemicals.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 2577 COOLING TREATMENT

Emergency Telephone Number

Medical (708) 920-1510 (24 hours)

SECTION 14 REGULATORY INFORMATION

(CONTINUED)

Sulfuric acid 7664-93-9 40+

TOXIC SUBSTANCES CONTROL ACT (TSCA):

The chemical ingredients in this product are on the 8(b) Inventory List (40 CFR 710).

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA), 40 CFR 261 SUBPART C & D:
Consult Section 11 for RCRA classification.

FEDERAL WATER POLLUTION CONTROL ACT, CLEAN WATER ACT, 40 CFR 401.15
(formerly Sec. 307), 40 CFR 116 (formerly Sec. 311):

This product contains the following ingredients covered by the Clean Water Act:

Sulfuric acid - Section 311

CLEAN AIR ACT, 40 CFR 60, SECTION 111, 40 CFR 61, SECTION 112:

This product does not contain ingredients covered by the Clean Air Act.

STATE REGULATIONS:

CALIFORNIA PROPOSITION 65:

This product does not contain any chemicals which require warning under California Proposition 65.

MICHIGAN CRITICAL MATERIALS:

This product does not contain ingredients listed on the Michigan Critical Materials Register.

STATE RIGHT TO KNOW LAWS:

The following ingredient(s) are disclosed for compliance with State Right To Know Laws:

Inorganic solvent	Trade secret
Carboxylate	Trade secret
Sulfuric acid	7664-93-9

SECTION 15 ADDITIONAL INFORMATION

None

SECTION 16 USER'S RESPONSIBILITY

This product material safety data sheet provides health and safety information. The product is to be used in applications consistent with



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 2577 COOLING TREATMENT

Emergency Telephone Number

Medical (708) 920-1510 (24 hours)

SECTION 16 USER'S RESPONSIBILITY

(CONTINUED)

our product literature. Individuals handling this product should be informed of the recommended safety precautions and should have access to this information. For any other uses, exposures should be evaluated so that appropriate handling practices and training programs can be established to ensure safe workplace operations. Please consult your local sales representative for any further information.

SECTION 17 BIBLIOGRAPHY

ANNUAL REPORT ON CARCINOGENS, U.S. Department of Health and Human Services, Public Health Service, PB 33-135855, 1983.

CASARETT AND DOULL'S TOXICOLOGY, THE BASIC SCIENCE OF POISONS, Doull, J., Klaassen, C. D., and Admur, M. O., eds., Macmillian Publishing Company, Inc., N. Y., 2nd edition, 1980.

CHEMICAL HAZARDS OF THE WORKPLACE, Proctor, N. H., and Hughes, J. P., eds., J. P. Lipincott Company, N.Y., 1981.

DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS, Sax, N. Irving, ed., Van Nostrand Reinhold Company, N.Y., 6th edition, 1984.

IARC MONOGRAPHS ON THE EVALUATION OF THE CARCINOGENIC RISK OF CHEMICALS TO MAN, Geneva: World Health Organization, International Agency for Research on Cancer, 1972-1977.

PATY'S INDUSTRIAL HYGIENE AND TOXICOLOGY, Clayton, G. D., Clayton, F. E., eds., John Wiley and Sons, N. Y., 3rd edition, Vol. 2 A-C, 1981.

REGISTRY OF TOXIC EFFECTS ON CHEMICAL SUBSTANCES, U.S. Department of Health and Human Services, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, 1983 supplement of 1981-1982 edition, Vol. 1-3, OH, 1984.

Title 29 Code of Federal Regulations Part 1910, Subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration (OSHA).

THRESHOLD LIMIT VALUES FOR CHEMICAL SUBSTANCES AND PHYSICAL AGENTS IN THE WORKROOM ENVIRONMENT WITH INTENDED CHANGES, American Conference of Governmental Industrial Hygienists, OH.



MATERIAL SAFETY DATA SHEET

PRODUCT

NALCO 2577 COOLING TREATMENT

Emergency Telephone Number

Medical (708) 920-1510 (24 hours)

SECTION 17 BIBLIOGRAPHY

(CONTINUED)

PREPARED BY: Ricky A. Stackhouse PhD., Toxicologist

DATE CHANGED: 07/30/92

DATE PRINTED: 08/01/92